

Abstract

According to the present disclosure a filter cartridge used as a serviceable component in a cartridge-style filter assembly is provided. The filter cartridge includes, mounted thereon, a communication/sensor circuit completion unit operably positioned so that it will complete a signal circuit only when the filter cartridge is properly mounted, for use. In a typical application, the communication/sensor circuit completion unit is an optic circuit completion unit. The communication /sensor circuit completion unit can be configured: as an optic conduit or reflector, which merely indicates that a circuit is complete; or it can be configured as part of an analytical sensor to evaluate a condition of liquid that passes outwardly from the filter cartridge. A cartridge-style filter assembly including a filter cartridge as characterized, is also provided. Further, a filter assembly comprising a filter head with a cartridge-style filter assembly as characterized is provided. Further, a filter head configured for use with such a serviceable filter cartridge, is provided. Finally, methods of assembly and use are described.